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ABSTRACT

Research has shown that females gaze more than males while speaking and listening regardless of the sex of their partner. To determine if these differences are due to biological sex or sex role, 24 dyads, in which subjects were matched on sex and sex role, conversed for 10 minutes while patterns of speech and gaze were recorded by two judges. Results were analyzed by computer. Analyses of variance with sex and sex role as between subject factors, pairs nested within sex by sex role conditions, and subjects nested within pairs revealed no significant differences among the groups for percent, frequency, or duration of gaze. When the conditional probability of each subject's gaze during his/her own vocalizations and pauses and during his/her partner's vocalizations and pauses was examined, there was an effect of sex but not of sex role. The gaze of males (especially feminine males) dropped significantly more than the gaze of females during the subject's own pauses. No differences were found between male and female gaze during their partner's speech turn. The findings suggest that differences in conversational gaze behavior are due at least in part to sex differences rather than learned sex role behaviors. (JAC)

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Sex versus Sex Role as Predictors of Conversational Gaze Behavior

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Abstract

Gaze patterns during conversation were investigated with a 2 x 2 factoral design to determine whether previously reported gaze differences between males and females were due to sex or sex role. Twenty-four dyads, in which subjects were matched on sex and sex role, conversed for 10 minutes while their patterns of speech and gaze were recorded. The gaze of males (especially feminine males) dropped significantly more than the gaze of females during the subject's own pauses. This finding suggests that differences in conversational gaze behavior are due at least in part to sex differences rather than learned sex role behaviors.

Females gaze more than males while speaking and while listening (Duncan & Fiske, 1977; Exline, 1963), regardless of the sex of their partner (Exline, Gray, & Schuette, 1965). As suggested by LaFrance and Carmen (1980), it is not clear whether these differences are due to biological sex or sex role. While LaFrance and Carmen investigated this question by examining the gaze behavior of masculine males, feminine females, and androgynous males and females, a more direct test of biological sex versus sex role as the determinant of gaze behavior could be made by contrasting sex and sex role in a factorial design.

Sex differences in eye contact are greater in some parts of conversation than in others (Dabbs, 1980; Exline et al., 1965). Thus, male-female differences in gaze management may be revealed by examining the parts of the conversation at a finer level than just listening versus speaking. Consequently the six speech codes developed by Feldstein and Welkowitz (1978) were used in the present study.

Method

The Personal Attributes Questionnaire (Spence, Helmreich, & Stapp, 1975) was administered to 100 males and 141 females. Median scores on the masculinity and femininity scales were used to select 12 feminine males, 12 masculine males, 12 masculine females, and 12 feminine females. Each subject was paired with another subject similar in sex and sex role to produce the four groups of the factorial design crossed on sex and sex role.

Each pair had a ten minute conversation while looking through a 6 inch square hole in a 2 ft. x 2 ft. box placed on a table between them. The subjects could see each other directly but their images were diverted to a camera in the box which recorded their conversations. Gaze was subsequently scored from the video tape by two judges who depressed a switch connected to a microcomputer whenever the pair member being scored by the judge gazed at the other. Reliability of scoring has been established in Dabbs, Evans, Hopper, and Purvis, (1980).

The microcomputer sampled each judge's gaze switch and the on-off voice signal of each subject every quarter second during the playback of the conversation. A larger computer expanded this data into the on-off states of A talks, B talks, A looks, B looks and the six speech codes developed by Feldstein and Welkowitz (1978). This data were summarized to give the percentage of time each code occurred for each subject, the number of times each code occurred, the mean duration of each code, and the conditional probability of gaze given each one of the speech codes.

Results

Analyses of variance with sex and sex role as between subject factors, pairs nested within the sex by sex role conditions and subjects nested within pairs revealed no significant mean differences among the groups for percent, frequency or duration of gaze. This result was surprising, given the commonly reported higher levels of overall gaze for females. We suspect that the failure to obtain higher levels of female gaze is due to random sampling error rather than any systematic cause.

THE CONDITIONAL PROBABILITY OF EACH SUBJECT'S GAZE DURING HIS OR HER OWN VOCALIZATIONS AND PAUSES AND DURING HIS OR HER PARTNER'S VOCALIZATIONS AND PAUSES WAS EXAMINED. THIS ANALYSIS WAS PERFORMED AS DESCRIBED ABOVE WITH AN ADDITIONAL WITHIN-SUBJECTS TRIALS FACTOR REPRESENTING VOCALIZATIONS AND PAUSES WITHIN THE SUBJECT'S TURN AND VOCALIZATIONS AND PAUSES WITHIN THE PARTNER'S TURN.

THERE WAS A SIGNIFICANT SEX X SPEECH INTERACTION, $F(3,60) = 3.81$, $p < .05$. MEAN SCORES ARE SHOWN IN TABLE 1. THE GAZE OF MALES AND FEMALES WAS APPROXIMATELY EQUAL DURING THEIR OWN VOCALIZATION BUT MALE GAZE DROPPED SIGNIFICANTLY MORE THAN FEMALE GAZE DURING THE SUBJECT'S OWN PAUSES. BOTH MALES AND FEMALES GAZED MORE DURING THEIR PARTNER'S VOCALIZATIONS AND PAUSES THAN DURING THEIR OWN, AND THESE LEVELS WERE ALMOST IDENTICAL FOR BOTH SEXES.

THE OVERALL MALE DROP IN GAZE DURING THEIR OWN PAUSES IS PARTIALLY THE RESULT OF A GREATER DROP IN GAZE AMONG THE FEMININE THAN THE MASCULINE MALES IN THIS SPEECH STATE. THE SEX X SEX ROLE X SPEECH STATE TRIALS INTERACTION WAS SIGNIFICANT, $F(3,60) = 2.90$, $p < .05$.

DISCUSSION

WE EXAMINED GAZE LEVELS OF MASCULINE MALES, FEMININE FEMALES, MASCULINE FEMALES AND FEMININE FEMALES AS THEY OCCURRED IN THE CONVERSATIONAL SPEECH STATES OF VOCALIZING AND PAUSING. THERE WAS AN EFFECT OF SEX BUT NOT OF SEX ROLE. FEMALES WERE FOUND TO DROP THEIR GAZE LESS THAN MALES DURING PAUSES OCCURRING IN THEIR OWN SPEECH TURNS. THIS EFFECT WAS PARTIALLY DUE TO A GREATER DROP IN GAZE IN FEMININE MALES DURING PAUSES IN THEIR SPEAKING

TURN. NO DIFFERENCES WERE FOUND BETWEEN MALE AND FEMALE GAZE DURING THEIR PARTNER'S SPEECH TURN.

THE RESULTS OF THIS STUDY SUGGEST THAT THE WIDELY REPORTED DIFFERENCES IN GAZE BETWEEN MALES AND FEMALES IS DUE TO UNLEARNED GAZE BEHAVIORS, POSSIBLY EXISTING IN INFANCY (HITTLEMAN, DICKES, O'DONOHUE, & BLOOMFIELD, 1980), RATHER THAN ACQUIRED SEX ROLE BEHAVIORS. ADDITIONALLY, IT APPEARS THAT THE PREVIOUSLY REPORTED HIGHER LEVELS OF GAZE WHILE TALKING FOR FEMALES IS IN FACT DUE TO THEIR MAINTAINING A RELATIVELY HIGH LEVEL OF GAZE DURING THEIR PAUSES, IN CONTRAST TO MALES WHO SHOW A LARGE DROP IN GAZE AS THEY PAUSE DURING THEIR SPEAKING TURNS.

TABLE 1

MEAN PROBABILITY OF GAZE IN DIFFERENT CONVERSATIONAL STATES

	CONVERSATIONAL STATE			
SEX	OWN VOCALIZATION	OWN PAUSE	PARTNER'S VOCALIZATION	PARTNER'S PAUSE
MALE	.64	.44	.89	.85
FEMALE	.66	.54	.88	.87

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